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ABSTRACT

The effects of school factors on occupational attainment of black students were studied based on data from the 1972 National Longitudinal Study (NLS) and its 1980 followup and the 1980 High School and Beyond (HSB) study and its 1982 followup. The sample sizes were as follows: 319 NLS females, 167 NLS males, 324 HSB females, and 259 HSB males. Socioeconomic status was measured by father's and mother's education and occupations, and parental income. Ability was measured by reading, vocabulary, and mathematics tests. School-related variables included grades, courses, and high school study program. Student views of who influenced their plans after high school (social-psychological factors) were also determined, along with their educational and occupational aspirations. Educational attainment was measured by years in vocational or trade school, highest level of college, and kind of degree earned. Occupational attainment was measured by the job held by the NLS respondents. It was concluded that the combination of background, social-psychological, and school factors was not very useful for understanding the black students' occupational attainment. It is suggested that structural variables, such as racial discrimination and labor market segmentation, play a strong role in determining the occupations available to blacks. (SW)

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Educational and Occupational Aspirations and Early Attainment of Black Males and Females

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Educational and Occupational Aspirations and Early Attainment of Black Males and Females

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Final Report of Research
Completed Under a Grant from
The Southern Education Foundation
Atlanta, Georgia
April, 1985

FOREWORD

The Southern Education Foundation and the family philanthropies which preceded it have had a special and continuing interest in the education of black Americans for more than a hundred years. The Foundation has been concerned particularly with programs aimed at increasing and improving higher education opportunities for blacks in the South.

In April, 1974, the SEF Board of Directors (renamed Board of Trustees in 1984) established a special project, the Higher Education Program, to address issues which were surfacing as a result of the then Adams v. Richardson case. Under this higher education component, the Foundation supported coalitions formed by citizens to monitor state desegregation plans, sponsored conferences and workshops, published papers, monographs and documents, and awarded general grants which focused specifically on achieving equity in higher education in the ten states originally affected by the Adams case.

In September, 1978, the Higher Education Program proposed concentrating a major portion of its allocation on a Research Task Force which was formed to plan a research agenda for the Foundation and to commission research projects. This body of six educators has commissioned over 20 studies since its inception; this document is presented as part of the Higher Education Program Research Series. Other publications which are part of the series are listed at the end of this report and are available to the public for $5.00 each.

SEF has been able to expand its Higher Education Program as a result of receiving grants since July, 1983 from the Ford Foundation; the publication of this report is made possible by the grants.

A list of other Foundation publications may be obtained by writing to the Southern Education Foundation.

Thank you.

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Chapter I

Introduction

The overall rate of college attendance by blacks in the United States is still considerably below that of whites despite the gains of the past two decades. In 1982, blacks comprised 8.0 percent of enollment in four-year institutions and 10.3 percent of enrollment in two-year institutions (National Center for Education Statistics, 1984). In the Adams states, in 1976, black undergraduates constituted 13.6 percent of total enrollment, while the black college age population in the South is almost 20 percent of the total (Brazziel and Brazziel, 1980; American Association of University Professors, 1983). Blacks earned 6.9 percent of all baccalaureate degrees awarded in 1980 (Trent, 1983). These figures suggest that there is still considerable room for improvement in educational attainment among blacks.

This study seeks to assess the process by which status is generated within the black population. Specifically, our efforts are an attempt to determine the particular mechanism that generates status among black Americans. The basic theoretical orientation for our analysis is the Wisconsin model of status attainment (Sewell, Haller, and Portes, 1969; Sewell and Hauser, 1975; Sewell, Haller, and Ohlendorf, 1970). This model and its variants, in their "traditional" form, have not worked very well in terms of their explanations of the black status attainment process

(see Hout and Morgan, 1975; Kerckhoff and Campbell, 1977; Portes and Wilson, 1976). We contend that this problem is due primarily to a misrepresentation or inadequate specification of a critical dimension within the status attainment model.

That is, the standard Wisconsin model and its variants are basically social-psychological models emphasizing the primary role played by social-psychological influences (see Portes and Wilson, 1975; Alexander, Eckland, and Griffin, 1975). These factors, usually measured in terms of influential others and aspirations, serve as key mediators of the effects of earlier social circumstances such as one's school career or family history.

It is at this point that we believe the problem lies. We contend that these factors are not as central to the generation of status for blacks as they are for whites. We hypothesize that the school dimension is of considerably more importance than the social psychological dimension for blacks. Due to the inadequate measurement of the school factor in most models, the generating mechanism for status has been inadequately accounted for among blacks.

In this research, we attempt to modify the "traditional" status attainment model. This modification will consist primarily of a respecification of the school dimension with the other three dimensions remaining basically unchanged. The rationale for respecifying this particular dimension is that we believe that this component

represents a very critical aspect of the status attainment process for blacks. Previous research has not adequately represented the effects of the school dimension within the context of the model as a whole. If our hypothesis concerning this dimension is correct, a respecification of this dimension should increase the explanatory power of the model for black American youths, both male and female.

An additional point concerning the nature of this analysis should be made. The basic analyses utilize data taken at two different points in time representing two different cohorts of respondents. An application of the proposed model to these two cohorts should provide us with information concerning the explanatory power of our model as well as information relating to changes that have occurred over time with respect to the status attainment process for blacks. The National Longitudinal Study respondents were seniors in 1972; the High School and Beyond students were seniors in 1980. An additional analysis will involve respondents who were sophomores in 1980. The **National Longitudinal Study** (NLS) respondents have been followed for several years, most recently in 1980. The **High School and Beyond** (HSB) follow-up survey was conducted in 1982, two years after the students completed high school. If our model explains similar proportions of the variance in the NLS and HSB data sets, we will have considerable confidence in its utility.

The Model:

The model proposed here follows the more traditional models in their basic form. That is, we accept the proposition that the generation of status is a function of three basic dimensions; a background dimension, a school dimension, and a social-psychological dimension. It is assumed that proper specification of these dimensions should account for substantial portions of the variation in status attainment. Because the process is assumed to flow in a single direction (from left to right), a great deal of emphasis is placed on the mediating influence of social-psychological factors (see Figure 1).

Figure 1. Status attainment model

We hypothesize that a focus by researchers on the strong mediating effects of the social-psychological factors has caused previous models to work poorly for blacks. This, as stated earlier, is primarily due to inadequate measurement of the school dimension.

Chapter 2

Review of Literature

During the past twenty years, a fair amount of agreement has developed among sociologists that the Wisconsin model and its various adaptations work well for white males (Featherman, 1981). Less progress has been made in explaining mobility processes among women (Sewell, Hauser, and Wolf, 1980) and nonwhites. Why there are differences in the effectiveness of the model for blacks and whites has been the subject of conjecture among scholars. The differences in the power of the model in explaining white mobility as compared to its power in accounting for black mobility have been attributed to measurement error on the one hand (Bielby, Hauser, and Featherman, 1977), and to differences in the opportunity structures of the groups on the other (Porter, 1974). Porter suggests that mobility processes among blacks are similar to what Turner (1960) calls "sponsored" mobility while for whites the process is more like Turner's "contest" mobility. In other words, for blacks the process is less meritocratic than it is for whites and more dependent on personal ambition and encouragement of parents and teachers.

Another plausible explanation for the weakness of the model for blacks is that most studies using the basic model do not include adequate measures of variables that are

important in the status generation process as it operates for blacks. We hypothesize that the school component is one such neglected dimension.

This review will be presented in the following order. First, we will look at socioeconomic background characteristics of family of origin. This will be followed by research on school characteristics, students' personal characteristics, and social-psychological factors.

Family Socioeconomic Status.

Most studies have found positive and significant relationships between family social status and level of students' educational aspirations (Allen, 1980; Epps, 1969; Howell and Frese, 1979; Hout and Morgan, 1975, Thomas, 1979). However, there are some exceptions. DeBord, Griffin and Clark (1977) and Kerckhoff and Campbell (1977) report that socioeconomic background has little effect on educational aspirations and expectations of black students.

The effect of socioeconomic background on occupational aspirations and expectations is usually weak but statistically significant and positive (Hout and Morgan, 1975; Howell and Frese, 1979). Porter (1974) found a small significant correlation between household head's occupation and black male students' occupational expectations, but a nonsignificant relationship between this variable and occupational aspirations. Lyon and Rector-Owen (1981) reported that for black women parental socioeconomic status

was one of the key predictors of occupational status attained. As Allen (1980) has pointed out, however, occupational aspirations seem to be less well explained by social background than educational plans. It is also of interest to note that in some studies of the status attainment process mother's education is the strongest socioeconomic predictor of black students' occupational aspirations (DeBord, Griffin and Clark, 1977; Howell and Frese, 1979).

Studies of educational attainment have usually found family social status to have an important influence on the amount of education attained by respondents (Kerckhoff and Campbell, 1977; Portes and Wilson, 1976; Thomas, 1980). Porter (1974) found small significant positive correlations between head of family's occupation and students' educational and occupational attainment, but no direct effect of parents' occupation when other variables were included in a multiple regression analysis. Wilson (1979) reported that family social status was more strongly related to black students' educational attainment in integrated schools than in segregated schools and was more important for "upper class" blacks than for lower class blacks. One indication of the way social status affects attainment comes from the study by Gurin and Epps (1975). This research on black students attending traditionally black colleges in the south found little effect of social status on academic performance or motivation. However, when students who

aspired to attend graduate or professional school were asked how certain they were that they would actually be able to enroll, those from poverty level backgrounds were much less certain about their ability to attend in the near future.

School Related Characteristics

Among the school related characteristics that have been found to have important effects on achievement, aspirations, and attainment of blacks are: student body racial composition (Bachman, 1970; Coleman, et al., 1966; Crain and Mahard, 1978; Falk, 1978; Wilson, 1979); classroom racial composition (McPartland, 1969); school mean social class (Coleman, et al., 1966); curriculum placement or academic track (Alexander, Cook, and McDill, 1978; Rosenbaum, 1980; Thomas, 1980); average ability level of school student body (Alexander and Eckland, 1975); students' grades (Allen, 1980; Hout and Morgan, 1975; Kerckhoff and Campbell, 1977; Portes and Wilson, 1976); and school academic climate (Brookover, et al., 1979). No single study has included all of these variables and the effects have differed from study to study (see Gottfredson, 1981). The NLS data set that we use in this study includes a limited number of school variables; i. e., grades, number of courses taken, and track. The HSB data set includes additional variables, but we limited our model to fit the NLS data set.

Students' Personal Characteristics

Ability and aptitude have been found frequently to have

a strong positive influence on the academic performance (grades or high school rank) of black students (DeBord, Griffin and Clark, 1977; Epps, 1969; Hout and Morgan, 1975; Howell and Frese, 1970; Kerckhoff and Campbell 1977; Portes and Wilson, 1976). However, one important study (Porter, 1974) found no direct effect of aptitude on grades; the effect was mediated entirely through ambition. This "deviant" finding may be explained by cohort differences (Porter's data were obtained from a 1960 sample while the other studies cited used data collected in 1965 or later). It is also possible that the difference may result from different methods of measuring key variables or different methods of analyzing the data.

There is also strong evidence that ability and aptitude directly influence aspirations and attainment of black students (DeBord, Griffin and Clark, 1977; Epps, 1969; Kerckhoff and Campbell, 1977; Porter, 1974; Thomas, 1980). There are, however, some inconsistencies in the research results. Portes and Wilson (1976) found the effect of aptitude on educational aspirations to be trivial, while Hout and Morgan (1975) found the effect of ability on educational expectations of black males to be mediated entirely by grades, although there was a direct effect of ability on the educational expectations of black females. Ability and aptitude are also related to almost all other variables included in studies of mobility processes. Thus, aptitude affects curriculum placement (Rosenbaum, 1980;

Thomas, 1977); significant others influence (DeBord, Griffin and Clark, 1977; Porter, 1974); disciplinary problems (Kerckhoff and Campbell, 1977; Wilson, 1979); and time spent on homework (Page and Keith, 1981).

Social-Psychological Factors

Achievement attitudes may be considered the motivational component of the social mobility process. Among the frequently studied achievement related attitudes are self-esteem, academic self-concept, and sense of control over the environment. Positive attitudes toward achievement are thought to be predictive of later attainments. Previous research has demonstrated that the self-perception and control orientation variables are positively and significantly related to academic achievement and educational expectations (Coleman, et al., 1966; Epps, 1969). Portes and Wilson (1976) found self-esteem to be second only to educational aspirations and stronger than socioeconomic status and mental ability in predicting educational attainment among black males.

Aspirations and expectations are also considered to be achievement attitudes (Allen, 1980). There is considerable evidence that educational and occupational aspirations and expectations are predictive of later actual attainment (Portes and Wilson, 1976; Thomas, 1980; Wilson, 1979).

In this study, the self-perception variables (e. g., self-esteem) are not included in the model because preliminary analyses indicated that they had limited

influence on the outcome variables. We view aspirations and expectations as intervening variables dependent upon social background, aptitude, and influential others. However, when we look at HSB sophomores, aspirations are treated as outcome variables.

Significant Others Influence

Most studies of the attainment process include measures of parental, peer, teacher, or counselor influence. For example, DeBord, Griffin and Clark (1977) obtained student reports of teacher, parent and peer influence. They found that mother's encouragement affects the occupational aspirations of black girls while peer group plans affect black boys. Porter (1974) found a composite measure of significant others influence to be a strong predictor of conformity to middle class values among blacks which, in turn, is a strong predictor of ambition, grades, and educational attainment.

The strong relationship between significant others influence and aspirations is to some extent the result of the fact that student self-reports are used in the assessment of both types of variables. Students' reports of the amount of influence or encouragement they receive are certain to be influenced by the students' own aspirations; in other words, students' perceptions of the way others see them probably reflect the way students view themselves. Also it seems that black students with high aspirations are likely to elicit the support/encouragement of other blacks.

In spite of this measurement problem, student reports of encouragement by influential others have been found to be strongly related to educational attainment (Thomas, 1980).

Chapter 3

Methodology

Sample

The data for this analysis were taken from the 1972 National Longitudinal Study (NLS) and its 1980 follow-up, and the 1980 High School and Beyond (HSB) study and its 1982 follow-up. Our samples, for both NLS and HSB, were first stratified with respect to sex. Research has indicated that the status generation process may differ in important ways for males and females (see Alexander and Eckland, 1974; Hout and Morgan, 1975). Thus, if our sample were pooled, estimates based on the total sample would be less accurate and less informative than estimates based on separate analyses for males and females. The analyses reported in this research are based on the following sample sizes: HSB males, 259; NLS males, 167; HSB females, 324; NLS females, 319. The HSB sample of high school sophomores was also used in one analysis. The sophomore sample included 203 males and 289 females.

Variables

The specific indicators used to represent each dimension in the model employed in this study are described below.

Background Variables:

Socioeconomic Status (SES) was measured by five indicators: father's occupation, mother's occupation,

mother's education, father's education, and parental income. The SES measure used in the analysis was a weighted linear combination of the five indicators. The weights were determined by regressing each factor on the ultimate dependent variable occupational attainment. The SES indicators for the HSB sample were identical to those used for the NLS data with the exception of parental income. For HSB the income categories ranged from less than $7,000 to more than $38,000, while for NLS the income categories ranged from less than $3,000 to more that $18,000.

Ability, for both the NLS and HSB data sets, was measured by three tests designed to tap the individual's general ability in three areas: reading (20 items), vocabulary (15 items), and mathematics (20 items). The ability measure used was a simple linear combination of these three tests. Weights were not employed because each test exerted comparable influence on occupational attainment.

School Related Variables:

Track was measured by a single indicator of the student's high school program; academic, general, or vocational. This variable was recoded to produce an ordinal scale with vocational program scored low and academic program scored high. The measure is identical for both HSB and NLS.

The Courses variable was measured by four indicators: total semesters of foreign language; total semesters of English; total semesters of science; and total semesters of mathematics. The information was obtained directly from school records for the NLS data set. The NLS courses variable is a weighted linear combination of the above four areas. The weights were determined by regressing each on the dependent variable occupational attainment.

For the HSB data set there were two major differences: first, the data were obtained from student self-reports; second, the foreign language component for HSB consisted of a combination of the total semesters in French, German, and Spanish. These areas, along with mathematics, English, and science, were then combined in a weighted linear fashion to yield the HSB courses variable.

Grades were taken directly from school records for NLS respondents. The grades obtained yielded a fourteen category measure ranging from below F to a high of A+. This variable was also measured in a different manner for the HSB sample. Grades were obtained from HSB student self-reports. The resulting measure was an eight category indicator ranging from a low of mostly below D or a numerical average

of 60 to a high of mostly A's or a numerical average of 90-100.

Social-Psychological Variables:

Influential Others (INFOTH) was measured by nine indicators for the NLS sample. Each asked respondents how much the following person(s) influenced their plans for after high school. The particular individuals addressed by the question were: parents, relatives other than parents, guidance counselor, teacher, principal, clergyman, state employment officer, other adult, and friends. Responses to each were based on a three category Likert scale: not at all, somewhat, and a great deal. The measure used here was a simple linear combination of each, conceptually designed to measure the degree to which outcomes are influenced by other individuals. The resulting measure had a theoretical range of 0 to 18.

For the HSB sample, INFOTH is a fundamentally similar variable with a few differences in the particular individuals to which the basic stem question is addressed. For the HSB sample, the relevant individuals for whom responses were solicited were: father, mother, guidance counselor, teachers, friends or relatives, military recruiters, and college recruiters. Preliminary analyses indicated that the differences in the way this variable is measured in the two samples do not substantially affect the overall validity of this concept. Consequently, we employed a similar combination strategy to yield a composite indicator ranging from a low of 0 to a high of 18.

Aspirations (ASP) was measured by two indicators, educational aspirations and occupational aspirations. For educational aspirations the respondent was asked to indicate the highest level s/he would like to attain. Categories ranged from a low of less than high school to a high of graduate or professional school. For occupational aspirations the respondent was asked to indicate the area of work s/he planned to enter. These areas were then recoded using Duncan (1961) socioeconomic index (SEI) scores. The resulting aspiration measure was a weighted linear combination of these two indicators. Weights were determined by regressing each on the dependent variables on occupational attainment. This variable is identical for the HSB sample.

Outcome Variables:

Educational Attainment (EDATT) was measured by three variables: years in vocational or trade school, highest level of college, and kind of degree earned. These were combined and recoded to create a single categorical variable consisting of eight categories ranging from a low

of no college or vocational training to a high of advanced degree for the NLS sample. The major difference in EDATT for the HSB sample is that these respondents have been out of high school only two years. Thus, we can expect that the HSB measure will be less representative of the ultimate attainment process than the NLS measure. With this in mind, the actual measure used for the HSB sample consists of three indicators: whether or not the respondent completed high school, number of years in vocational or trade school, and highest level of college attained. These three indicators were combined and recoded to create a single ten category variable. The lowest category did not complete high school; the highest completed one or more years of college.

Occupational Attainment (OCCATT) was measured by a single indicator, the job the NLS respondent held as of the 1980 follow-up. The responses were then coded based on census classifications and then recoded using Duncan SEI scores. Occupational attainment was not assessed for the HSB sample because these respondents were too recently graduated from high school to make such an assessment meaningful.

Data Analysis.

The basic dynamics of the model are assumed to be as follows. Background factors are those crucial elements that the individual brings to this process. They then are assumed to have a direct impact on those school factors that are relevant for subsequent attainment. The effects of these school factors are then mediated in some respects by the social-psychological factors which, in turn, have a direct impact on status. As we view the process for blacks, we feel that the social-psychological component should have less of a mediating effect on school factors. As a result, school factors should have a more direct effect on status.

The particular estimation techniques used in the analyses are those usually found in the status attainment literature. These strategies, commonly referred to as path

analytic techniques, have proven to be quite informative with respect to understanding the dynamics of status attainment (for a discussion of these strategies see Goldberger and Duncan, 1973; Hanushek and Jackson, 1977; Pedhazur, 1982). Each coefficient appearing in a table had to be significant at the .025 level in order to be retained. Following this, each coefficient had to have a tolerance level of at least .05 to remain in the equation. Thus, all variables appearing in the tables meet these requirements. Where blanks appear, the variables did not meet these requirements. There are no unmeasured variables in the model. Residual paths are not included in the path diagrams because we did not wish to complicate the presentation. They are easily interpretable from the tables of non-zero paths. There the R^2 value for each dependent variable is given and the error component associated with each is simply $1-R^2$.

Some scholars have questioned the assumption that the status attainment process can be explained satisfactorily by a recursive model. They suggest that there are reciprocal effects that should be taken into consideration. We contend that, in a theoretical sense, the use of reciprocal models is only important when one is actually concerned about estimating their effects. In this case, that is not our basic concern. Also, we do not believe that our recursive estimation is unrealistic. Although Pedhazur (1982) mentions both motivation and aspirations in this vein, it is

our contention that only such an estimation that involved motivation directly would create unrealistic estimates. That is, it is our position that aspirations do not function in the same reciprocal fashion as does motivation, especially given the particular measurement of aspirations used here. In addition, we compensate in some sense for aspirations being based on performance by the use of grades as a predictor of aspirations and then using aspirations as a predictor of achievement measured in terms of educational attainment. Such a situation would have the result of at least producing statistically reliable results (if not statistically consistent), and would also be in line with the argument raised by Pedhazur. Our assumptions aside, when residuals were plotted against predicted scores for the full model, there did not appear to be any serious violations of the regression assumptions.

Chapter 4

Findings

NLS Males. Table 1 provides the non-zero paths for males using the NLS data (correlations for the relevant variables are presented in Appendix A; an expanded version of this table appears in Appendix B). Similar information is presented in Figure 2. All variables included in tables and figures are statisticaly significant (at the .025 level or less).

Our model does a rather poor job of explaining occupational attainment. It accounts for only about 17 percent of the variance in occupational status. The only two variables that have significant direct effects on occupational attainment are ability as measured by the achievement tests and educational attainment.

A glance at Figure 2 indicates that even though the other factors in the model do not directly influence occupational attainment, a number of additional factors tend to be mediated via educational attainment. That is, a great deal of the influence of prior variables in the model tends to be transmitted through educational attainment which then has the most significant impact on occupational attainment.

In addition, Table 1 also indicates that our model does a much better job of accounting for educational attainment among black NLS males. Slightly more than 30 percent of the

variance in this outcome is explained. The significant direct influences were ability, track, the influence of significant others, and aspirations. Contrary to expectations, the school component did not exert much influence on educational attainment. In fact, only track from among this group of variables had a significant direct influence on educational attainment. However, even this variable was not as influential as ability; ability was by far the most important determinant of educational attainment (b = .353). The aspirations variable was second in importance (b = .196).

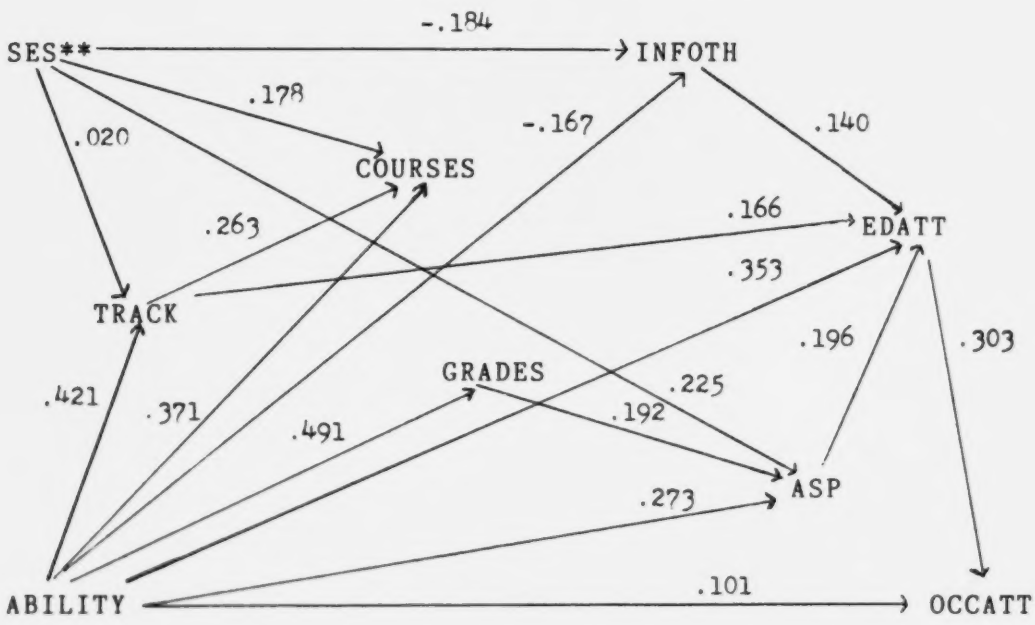
Table 1

Selected Non-zero Paths for National Longitudinal Study Males*

Independent Variables	OCCATT	EDATT	ASP	INFOTH
SES	-	-	.225	-.184
Ability	.101	.353	.273	-.167
Track	-	.166	-	-
Courses	-	-	-	-
INFOTH	.140	-	-	
ASP	-	.196	-	-
EDATT	.303	-	-	-
R^2	.172	.308	.213	.049

*The numbers in this and future tables are standardized regression coefficients (b).

Figure 2. Male Status Attainment Model Using National Longitudinal Study Data.*



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*All paths included in diagram are statistically significant at least at the .025 level.

**Variables defined: SES = Socioeconomic status; INFOTH = Influential others influence; COURSES = Number of courses taken; TRACK = type of high school program, i. e., academic, general, or vocational; EDATT = Educational attainment; GRADES = High school grades (from records for NLS; from self-reports for HSB); ASP = Aspirations; ABILITY = combined scores on reading, vocabulary, and mathematics tests; OCCATT = Occupational attainment.

The pattern here is similar to that usually found for white males. That is, educational attainment is a primary mediator of the effect of prior variables on occupational attainment, and social-psychological factors are primary mediators of the effects of school and background factors on educational attainment. What is troubling about this

estimation is the rather small amount of variance in occupational attainment that is explained. What this implies is that, for black males, the attainment of occupational status cannot be explained by background, school, and social-psychological factors. It is probable that structural factors such as racial discrimination in employment and the existence of a dual labor market may be more important than the factors included in this model.

Although the model does a much better job of explaining educational attainment than was the case for occupational attainment, there is still considerable room for improvement. About 30 percent of the variance is accounted for here, while some analyses using white samples have been able to explain 50 percent of variance in educational attainment.

In addition, we find that the model only does well in accounting for the total effects of the background and social-psychological components (see Table 2). The school component is less well accounted for. For track, our model only explains approximately 46 percent of the total effect, while explaining only 10 percent for grades, and about 1 percent for courses.

In summary, we found for NLS males that the presumed school component had little impact on the generation of status when the social-psychological component is taken into consideration. That is, social-psychological factors tend to mediate significant portions of the effects of prior

Table 2

Decomposition of Effects on Educational Attainment for National Longitudinal Study Males

Independent variables	Direct	Indirect	Explained	Total*
SES	-	.023	.023	.099
Ability	.353	.120	.473	.496
Track	.166	.001	.167	.363
Courses	-	.003	.003	.341
Grades	-	.038	.038	.373
INFOTH	.140	-	.140	.111
ASP	.196	-	.196	.370

*The Total Effects column is larger than the Explained Effects column because the total effect includes "spurius" effects that are not accounted for (explained) by the model.

determining factors and tend to have the most important influence on status after measured ability. Our model did not effectively account for occupational status, but it does indicate that educational attainment, which was assessed in a more efficient manner, is one of the most important contributors to occupational status. It is with respect to the generation of educational attainment that ability and the social-psychological factors tended to dominate.

NLS Females. The findings for NLS females given in Table 3 and depicted graphically in Figure 3 provide a rather interesting contrast to the findings for NLS males.

Just as was the case for males, the model does a rather poor job of accounting for occupational attainment. In fact, it accounted for even less of the variance here (about 14 percent). On the other hand, for educational attainment, the model was more successful for females than for males, accounting for just over 34 percent of the variance. We also find with respect to educational attainment that the school component tends to be more pronounced as a significant influence. Both track (b = .195) and grades (b = .105) have a rather substantial direct effect on educational attainment.

Table 3

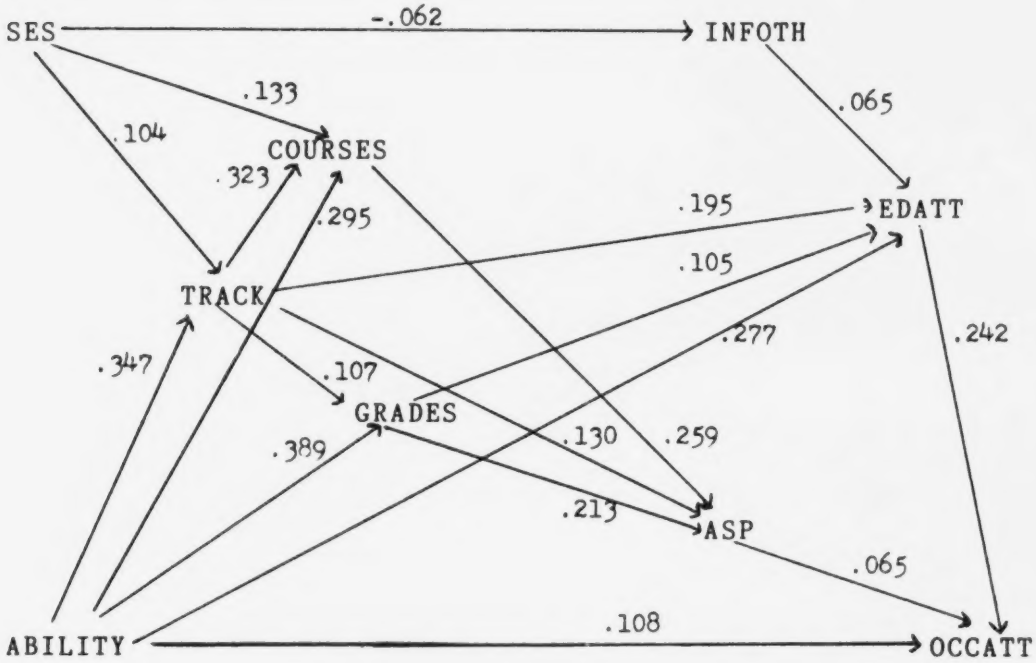
Non-zero Paths for National Longitudinal Study Females

Independent Variables	OCCATT	EDATT	ASP	INFOTH	GRADES
SES	-	-	-	-.062	-
Ability	.108	.275	-	-.218	.389
Track	-	.195	.139	-	.107
Courses	-	-	.259	-	-
Grades	-	.105	.213	-	-
INFOTH	-	.065	-	-	-
ASP	.065	.331	-	-	-
EDATT	.242	-	-	-	-
R^2	.136	.343	.139	.037	.191

The importance of the school component with respect to

educational attainment for females is most easily understood by observing the generating mechanism for the other influential factors. As was the case for males, ability and aspirations stand out as the most important determinants of educational attainment. The relative positions of the two variables, however, are reversed. For males, measured ability was the dominant factor with aspirations being second in importance. For females, aspirations stand out as the most crucial determinant (b = .331), while ability is second in importance (b = .275).

Figure 3. Female Status Attainment Model Using National Longitudinal Study Data



When we ask which factors are most important in the generation of aspirations, we find that the only important

determinants are school factors. Grades, semesters of coursework taken, and track all have significant direct effects on aspirations, thus, indicating the relative importance of school variables for NLS females as compared to NLS males. Note that the only school variable that had a significant direct effect on aspirations for males was grades, with most of the important determinants being related to the background of the student.

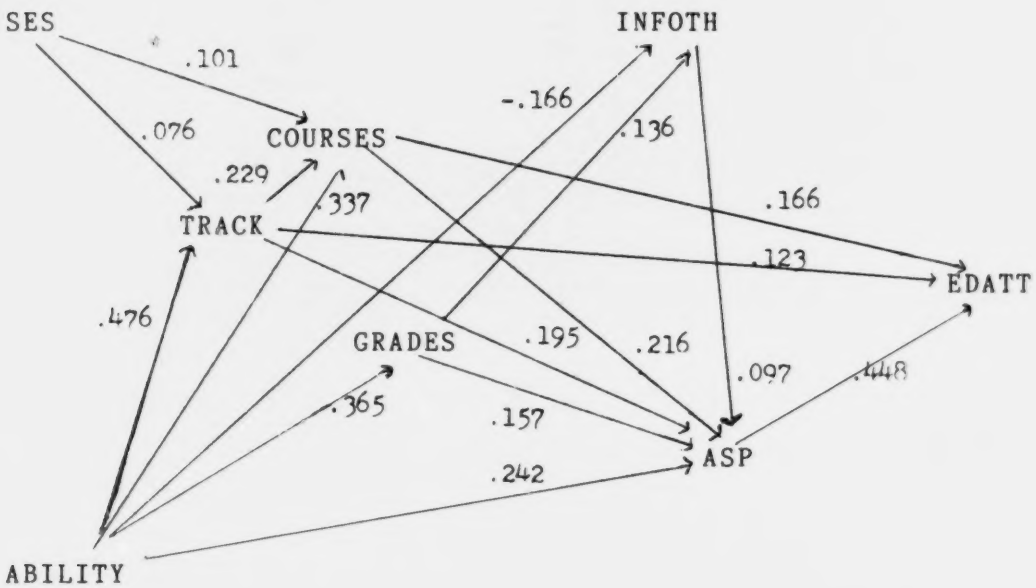
As an additional indication of the explanatory power of the model with respect to the generation of educational attainment for females, the decomposition of effects is presented in Table 4. Observe that the model does extremely well in accounting for the total effects of all relevant variables with the exception of semesters of coursework taken. The model accounts for only 23 percent of the total effect of this variable.

Table 4

Decomposition of Effects on Educational Attainment for National Longitudinal Study Females

Independent Variables	Direct	Indirect	Explained	Total
SES	-	.036	.036	.094
Ability	.275	.179	.454	.428
Track	.195	.089	.284	.380
Courses	-	.086	.086	.368
Grades	.105	.070	.175	.339
INFOTH	.065	-	.065	.004
ASP	.331	-	.331	.454

Figure 4. Male Status Attainment Model Using High School and Beyond Data



It is clear, therefore, that our assumption regarding the importance of the school component is partially supported for NLS females. As was the case for males, however, occupational status cannot be adequately explained by the variables in the model. Again, we suspect that the problem is structural. That is, forces such as racial discrimination and labor market segmentation that cannot be explained by this type of analysis may account for variation in occupational status.

On the other hand, the analysis provides rather definitive support for the importance of school factors independent of the social-psychological component. The school factors mediate both background and ability for females, and also have direct influences on educational

Table 5

Non-zero Paths for High School and Beyond Males

Independent Variables	EDATT	ASP	INFOTH	GRADES	COURSES
SES	-	-	-	-	.101
Ability	-	.242	-.166	.365	.337
Track	.123	.195	-	-	.229
Courses	.166	.216	-	.121	-
Grades	-	.157	.136	-	-
INFOTH	-	.097	-	-	-
ASP	.448	-	-	-	-
R^2	.294	.348	.040	.133	.239

attainment. In addition, school factors are all mediated by aspirations which, it should be noted, do not mediate any other prior factors.

HSB Males. Table 5 and Figure 4 present the educational attainment model for males using HSB data. This analysis does not include occupational attainment because these respondents are only two years out of high school and, therefore, have not had time to reach positions such that occupational attainment data would be comparable with the NLS data. This is true to some extent for educational attainment as well. However, there is sufficient comparability (and variance in attainment) to make this comparison meaningful.

Observing Table 5 we find that the model explains approximately the same amount of variance in educational attainment for HSB males (29 percent) as for NLS males (30 percent). Although similar proportions of variance are explained for the two samples, there are some differences in the effects of certain variables. We find that, unlike NLS males, for HSB males educational attainment is influenced considerably more by school factors. For NLS males, background and social-psychological factors were more important. For HSB males, however, the background factors had no direct impact on educational attainment while only aspirations among the social-psychological variables had any significant impact. On the other hand, although aspirations had the strongest effect (b = .448), both track and semesters of coursework had significant direct effects on attainment (b = .123 and .166 respectively). The pattern for HSB males is very similar to that for NLS females. School factors tend to dominate, comprising three of the five significant determinants. Grades, semesters of coursework taken, and track all were significant determinants of aspirations. This is quite consistent with the pattern observed for NLS females, and unlike the pattern for NLS males where aspirations were primarily the result of background factors.

Thus, we find that when we apply the NLS model to HSB males the explanatory power of the model is not substantially decreased. However, there were some important

changes in the generating mechanism. In the NLS cohort, the social-psychological factors were more crucial in generating educational attainment with school factors exerting very little influence either in a direct or indirect manner. For the HSB cohort, the school variables emerge as quite significant components in the status generating process. They not only have direct consequences for higher levels of educational attainment, but also function indirectly through the generation of higher levels of aspirations. As was noted above, the results for HSB males are quite similar to those observed for NLS females.

The differences observed for the two male cohorts suggest the possibility that a very fundamental shift in the generation of educational attainment among black Americans occurred between 1972 and 1980. If this is indeed the case, it would appear that the attainment of high levels of education has become less dependent on individual ascriptive and/or motivational factors and more dependent on institutional/school factors.

HSB Females. With respect to educational attainment for females, we find that we do less well with the HSB cohort than with the NLS sample. Our model explains only 25 percent of the variance for HSB females as compared to about 34 percent for the NLS females (see Table 6 and Figure 5). In addition, there is also a slight shift in the importance of the background factors.

As was the case for the NLS females, two school factors (Track and Grades) have rather substantial direct influences on educational attainment. Only semesters of coursework taken did not have a direct influence from among this group of school factors. However, coursework does affect educational attainment indirectly through aspirations. Aspirations, in turn, had the strongest direct influence on educational attainment (b = .334) as was the case for NLS females.

This represents the extent to which these two cohorts are similar. By observing the determinants of the aspirations variable, we begin to understand the shifts that have taken place for females. The factors responsible for the generation of educational aspirations are substantively different for the two cohorts. For NLS females the principal influences were all school factors. In the HSB cohort, not only were school factors important, but background (both SES and Ability) also exerted a significant direct impact on this variable.

This finding implies a slight shift away from the more institutional factors observed in the NLS cohort to an emphasis on the more ascriptive and/or motivational individual components in the HSB group. This is not to imply that school factors are unimportant; they still have a significant impact on aspirations. However, they are not sole determinants of aspirations in the HSB cohort as is the case for the NLS cohort. For both NLS and HSB females and

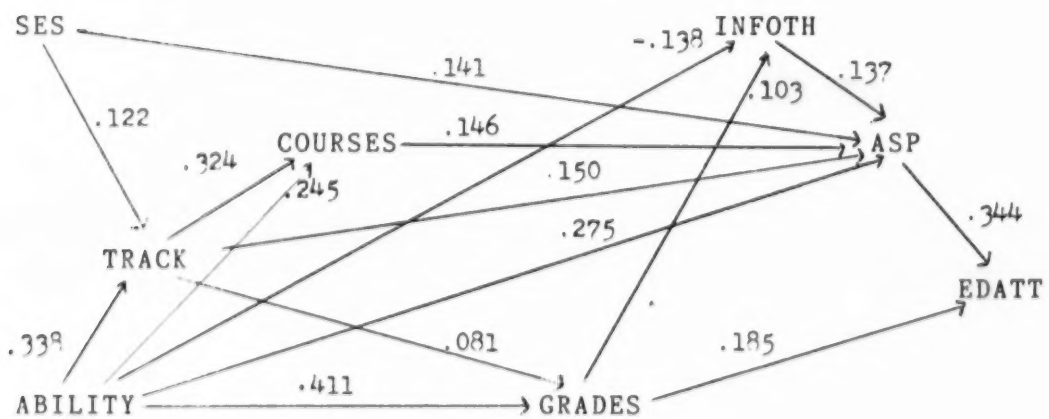
for HSB males, the aspirations variable is the most powerful determinant of educational attainment.

Table 6

Non-zero Paths for High School and Beyond Females

Independent Variables	EDATT	ASP	INFOTH	GRADES	COURSES
SES	-	.141	-	-	-
Ability	-	.275	-.138	.411	.245
Track	.122	.150	-	.081	.324
Courses	-	.146	-	-	-
Grades	.185	-	.103	-	-
INFOTH	-	.137	-	-	-
ASP	.344	-	-	-	-
R^2	.250	.337	.032	.169	.225

Figure 5. Female Status Attainment Model Using High School and Beyond Data.



Results indicate, then, for the HSB females that there has also been a shift in the process by which status is generated. Although not as substantial as the shift for males, the findings suggest that there has been a general tendency in recent years for background factors to increase their influence. The fact that the model accounts for no more than 34 percent of the variance in educational attainment for NLS females and only 25 percent for HSB females suggests that other factors (presumably unmeasured) are also contributing to the variance in educational attainment. That is, we suspect that the factors typically included in this type of research are becoming less influential, and that perhaps some previously unidentified variables are becoming more important.

HSB Sophomores. In an effort to see if early attainment processes differ from the pattern observed for the HSB seniors, we applied our model to the HSB sophomore cohort. As was the case in applying the NLS model to the HSB data set, data limitations only allow for a partial comparison. That is, we can only look at the generation of aspirations (rather than educational attainment) for the sophomore cohort.

HSB Sophomore Males. We do less well in accounting for the variance in aspirations for the sophomore males than we did for the senior males. Here we can only account for about 27 percent of the variance as opposed to about 35 percent for the senior males (see Figure 6). There is

little difference in the aspirations generation process for sophomore males as compared to HSB senior males. School components tend to dominate in terms of their influence within the model. Three of the five significant determinants of aspirations are school factors. In fact, all three school variables entered into the model (track, courses, and grades) directly influence this outcome. In addition, track has the most profound influence on aspirations (b = .187), followed by two non-school variables; SES (b = .116), and influence of significant others (b = .114). Although two of the most important determinants of aspirations are not school variables, one, influential others, is itself determined solely by the school variable courses taken. This is not substantially different from the senior HSB results.

What is different about the sophomore results, however, is the decreased importance of ability. For senior males, ability had a significant direct influence on all relevant dependent variables except educational attainment. For the sophomores, ability only directly influenced grades and track, and in neither case was it the most important influence.

HSB Sophomore Females. Here too, less of the variation in aspirations was accounted for than was the case for the senior group. The model explains about 29 percent of the variance for sophomore females as compared to about 34 percent for senior females. However, the same variables

tend to dominate (see Figure 7). For sophomore females, SES, track, courses taken, grades, and influential others all have significant direct effects on aspirations. For senior females, the only difference was that ability also had a significant direct effect and grades did not. This does, however, point to some rather interesting changes.

Recall that it was observed for the senior female cohort that background factors were becoming more important in the generation of status for the 1980 cohort than it had been for the 1972 seniors. The results for the sophomores imply a similar trend. What is different here, however, is the strong influence of background factors. That is, for the senior females, ability stood out as the most crucial determinant with SES exerting less influence. For the sophomore group, there is a significant reversal of influence. Ability only directly influences track and grades, while SES has a significant direct effect on all succeeding factors except grades. In addition, it is the most important determinant of both track ($b = .155$) and aspirations ($b = .136$).

It should be noted that in no other case was SES such a dominant factor. This tends to provide additional support for the contention that there seems to be a general trend, at least among females, away from the more structurally oriented dimensions such as school factors and toward the more individually oriented background characteristics. We

Figure 6. Male Status Attainment Model Using High School and Beyond Sophomores.

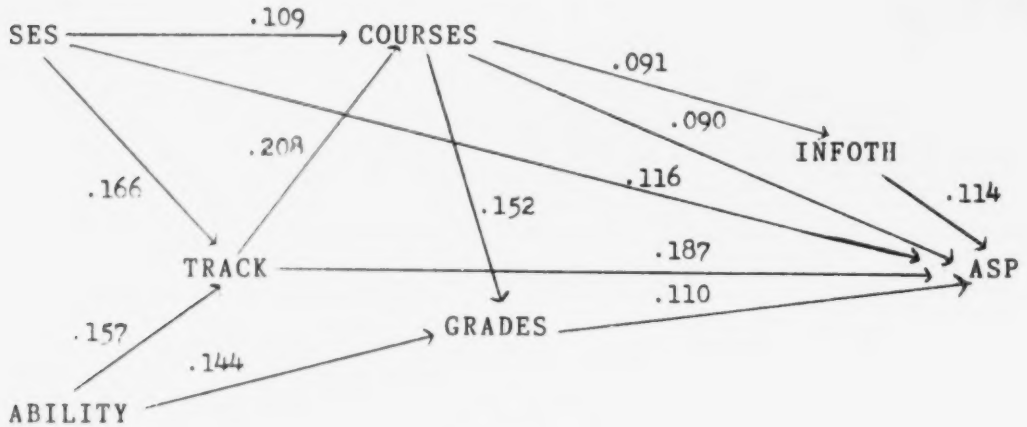
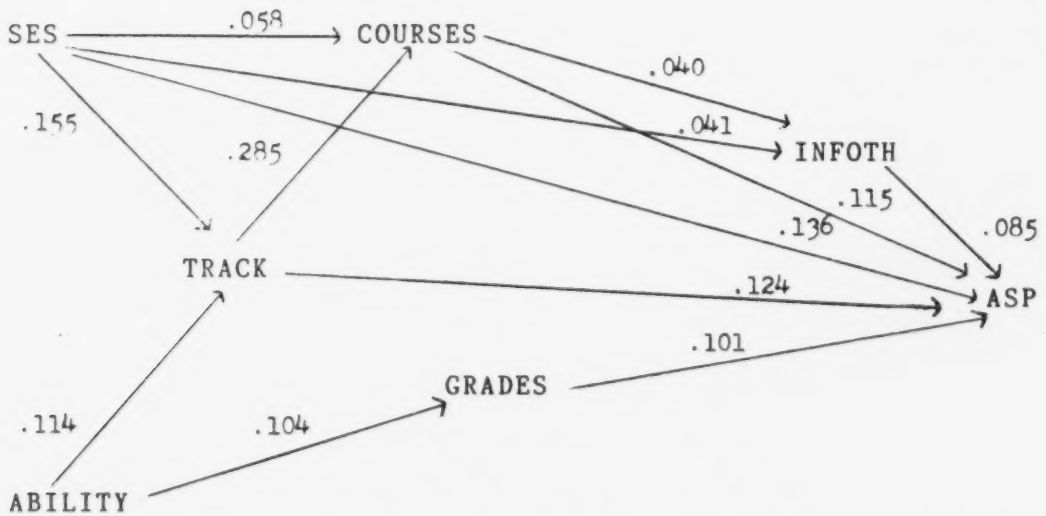


Figure 7. Female Status Attainment Model Using High School and Behond Sophomores.



reiterate that this is not an indication that school factors have decreased in importance. Rather it is the case that the results seem to indicate that SES has become, or perhaps more appropriately, is becoming a more salient factor in the generation of success among black American females.

Alternate Model Using HSB Seniors. In an attempt to improve our specification of the school component, we conducted an analysis in which additional school variables were added to the model, and educational and occupational aspirations were entered as separate variables rather than as a composite. This analysis involved the HSB senior cohort. Three additional school variables were added to the model: the type of school (public or private) the student attended; whether or not the respondent had taken remedial or advanced courses; and achievement as measured by standardized tests. A different measure of ability was also used comprised of the combined scores of a picture/number test, a mosaic comparison test, and a visualization test (this measure replaced the ability measure based on the composite scores of the math, reading and vocabulary tests).

The inclusion of the additional variables does not greatly alter our results. While differences are observed, the basic findings remain generally unaltered. For males, we find that courses taken and educational aspirations are the only variables that have any direct effect on educational attainment. This differs from the original specification only in that track also had a significant

direct effect that does not show up now. The amount of variance explained by the model only increased from 29 percent to about 31 percent (Table 7). It is interesting to note that in this specification we are able to account for over 55 percent of the variance in achievement for black males. This is quite substantial given other attempts at explaining achievement.

The results of this analysis suggest that almost all of the influential determinants of aspirations in the original model are attributable to educational aspirations. The major difference between the two models is with respect to the influence of background factors. In the original model, ability had a strong direct effect on aspirations; in the alternate model, socioeconomic status influences aspirations along with the school variables (track, courses, grades, and achievement).

For <u>females</u>, as was the case for males, there is only a slight improvement in accounting for the variance in educational attainment (27 percent as compared to 25 percent). However, unlike the male results, ability has a strong direct effect on educational attainment along with grades and educational aspirations (see Table 8). Educational aspirations are influenced by socioeconomic status, ability, track, courses taken, grades, and influential others. We also do a good job of predicting achievement among females, accounting for 42 percent of the variance. It is interesting to note that for both sexes

achievement does not influence educational attainment. Our basic conclusion for the results of the alternate specification is that the overall pattern observed in the original specification is not substantially changed.

TABLE 7

Non-Zero Paths for HSB Males: Alternate Model

	Dependent									
	EDATT	ACH	OCCASP	EDASP	INFOTH	GRADES	CRSTYPE	COURSES	TRACK	TYPSCH
SES	-	.222	.154	.161	-	-	-	.176	.176	.290
ABILITY	-	.270	-	-	-	-	-	-	.195	-
TYPSCH	-	.185	-	-	-	-	-	.137	.209	-
TRACK	-	.183	-	.280	-	-	.178	.300	-	-
COURSES	.171	-	-	.199	-	.210	.171	-	-	-
CRSTYPE	-	-	-	-	-	.202	-	-	-	-
GRADES	-	.199	-	.192	-	-	-	-	-	-
INFOTH	-	-.096	-	.135	-	-	-	-	-	-
EDASP	.465	.173	.427	-	-	-	-	-	-	-
OCCASP	-	-	-	-	-	-	-	-	-	-
ACH	-	-	-	-	-	-	-	-	-	-
R^2	.306	.552	.241	.326	-	.100	.078	.199	.153	.081

TABLE 8

Non-Zero Paths for HSB Females: Alternate Model

	Dependent									
	EDATT	ACH	OCCASP	EDASP	INFOTH	GRADES	CRSTYPE	COURSES	TRACK	TYPSCH
SES	-	-	-	.200	-	-	-	-	.163	.119
ABILITY	.142	.273	-	.127	-	.133	.196	.121	.157	.129
TYPSCH	-	-	-	-	-	-	-	-	.194	-
TRACK	-	.123	-	.195	-	-	.185	.389	-	-
COURSES	-	.129	-	.184	-	.149	-	-	-	-
CRSTYPE	-	-	-	-	-	.207	-	-	-	-
GRADES	.165	.228	-	.185	-	-	-	-	-	-
INFOTH	-	-.135	-	.148	-	-	-	-	-	-
EDASP	.386	.247	.406	-	-	-	-	-	-	-
OCCASP	-	-	-	-	-	-	-	-	-	-
ACH	-	-	-	-	-	-	-	-	-	-
R^2	.273	.420	.162	.323	-	.107	.083	.182	.109	.031

Chapter 5

Summary

Our analysis has revealed that the relative importance of school factors tends to vary depending on what cohort one is observing. We found that for NLS males school factors were relatively unimportant, with social-psychological factors being more important. Because the model explained only 17 percent of the variance in occupational attainment for males and 14 percent of the variance in occupational attainment for females, we concluded that the combination of background, school and social-psychological factors included in the model is not very useful for understanding the occupational attainment process among black Americans. We suggest that structural variables, e. g., racial discrimination and labor market segmentation, not included in this type of model play a strong role in the determination of occupations available to blacks. Therefore, the Wisconsin model, which is based on the assumption that individual merit determines attainment is probably not directly applicable to the status attainment process among "castelike minorities" (Ogbu, 1978). Hirschman and Wong (1984) concluded that only about half of black males' occupational disadvantage relative to whites is attributable to lower educational levels. What was significant for black males was their unequal participation in the occupational hierarchy. Blacks are not able to reach occupational levels

comparable to those attained by whites with similar educational and personal resources.

Although doing a much better job of accounting for educational attainment, we found that for NLS males, our assumptions were not correct. School factors, even after being specified in a more representative manner, did not dramatically increase our understanding of the generation of educational attainment for the NLS males.

We also found that this pattern did not generalize to the HSB sample. Using the HSB data to estimate a similar model, we found that school factors contributed significantly more to explanations of educational attainment than any of the other dimensions considered. This finding indicated a rather dramatic shift away from the individually ascriptive and/or motivational factors toward institutional or school factors. In other words, what goes on within the schools seems to matter considerably more in the 1980s than it did in the early 1970s.

Our analysis indicated for females that the generation of status was already based on the more institutionally related school factors in the early 1970s. School related factors were by far the most critical elements in this process. Thus, the process found for the 1980 cohort of males was one that females exhibited in the early 1970s.

This process, however, has not remained stable. Our analysis revealed a slight shift for females over time. That is, background factors tended to be more important in

the 1980s for females than they were in the 1970s. This is not to say that the institutional factors decreased in importance. The analysis revealed that the school factors continued to be important, but that the background factors increased in importance for the 1980 HSB females.

Thus, given the relative stability of the school factors for the two female cohorts as well as the shift toward an emphasis on school factors among males, it is likely that the pattern observed for females tends to be the pattern that males will follow at a later point in time. If this assessment is correct, we can expect that background factors will also become more relevant for black males in the future.

It is of interest to note that in the alternate model using HSB data we do a good job of predicting achievement as measured by standardized tests. The variables that had a positive effect on achievement for males (Table 7) were socioeconomic status, ability, type of school (public or private), track, grades, and educational aspirations. For females, ability, track, grades, and educational aspirations were positive influences (Table 8). What is somewhat puzzling in this analysis is the fact that achievement appears to be unrelated to educational attainment. This is especially troublesome given the current trend in the Adams states toward requiring higher scores on entrance examinations for college admission. Our data suggest that aspirations may be more important for educational attainment

among blacks than measured achievement. One possible explanation for this seeming anomaly is the fact that achievement tests do not measure blacks' educational accomplishments very well. Thus, the student's personal ambitions tend to be somewhat more important than achievement test scores in predicting educational attainment. However, this interpretation must be viewed with caution because of a major limitation of the HSB data. That is, these students have been out of high school only two years. This means that our measure of educational attainment is constrained by the fact that students have not had time to complete their education. Future follow-up surveys may find that with additional variance in educational attainment better prediction is possible. This limitation does not apply to the NLS data to the same extent because students in that cohort had been out of high school for eight years.

What also becomes evident is that the "traditional" dimensions usually used to estimate occupational aspirations and occupational status attainment are quite inadequate. This may imply that something important is missing from the model(although measurement error cannot be ruled out). Discrimination may well be the missing variable. However, the missing dimension could also be what Ogbu (1978) refers to as the structure of opportunity; those societal factors associated with a job ceiling for blacks as well as the continuation of a dual labor market. Attempts to measure

the missing elements are beyond the scope of this research, however, and will have to await future efforts.

What we can say is that the model we have used permits us to identify, to a certain degree, the basic pattern associated with the generation of educational attainment. Also, we can point out that there is support for our contention that as things now stand, the more institutionally relevant (school) factors are among the critical elements in the status attainment process for both black males and black females. These factors have a profound influence on educational attainment both in terms of direct and indirect effects. Aspirations are still important, but they serve primarily as mediators of school factors since they are almost wholely generated by these institutional factors.

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APPENDIX A

CORRELATION MATRIX FOR

NLS MALES

	SES	Ability	Track	Courses	Grades	Infoth	ASP	EDATT	OCCATT
SES	1.000								
Ability	.037	1.000							
Track	.036	.421	1.000						
Courses	.202	.488	.425	1.000					
Grades	-.055	.491	.262	.298	1.000				
Infoth	-.169	-.082	.021	.020	.016	1.000			
ASP	.224	.375	.250	.264	.313	-.009	1.000		
EDATT	.099	.496	.363	.341	.373	.111	.370	1.000	
OCCATT	.067	.283	.202	.241	.184	.085	.142	.385	1.000

CORRELATION MATRIX FOR

NLS FEMALES

	SES	Ability	Track	Courses	Grades	Infoth	ASP	EDATT	OCCATT
SES	1.000								
Ability	.019	1.000							
Track	.110	.349	1.000						
Courses	.174	.410	.441	1.000					
Grades	-.017	.426	.243	.237	1.000				
Infoth	-.054	-.167	-.019	-.020	-.025	1.000			
ASP	.139	.255	.268	.310	.274	-.029	1.000		
EDATT	.094	.428	.380	.368	.339	.004	.454	1.000	
OCCATT	.052	.250	.153	.199	.185	.001	.222	.339	1.000

CORRELATION MATRIX FOR

HSB MALES

	SES	Ability	Track	Courses	Grades	Infoth	ASP	EDATT
SES	1.000							
Ability	.465	1.000						
Track	.281	.476	1.000					
Courses	.300	.446	.389	1.000				
Grades	.076	.365	.167	.259	1.000			
Infoth	-.085	-.068	.054	.049	.105	1.000		
ASP	.318	.488	.421	.441	.334	.114	1.000	1.000
EDATT	.169	.326	.348	.363	.254	.138	.521	1.000

CORRELATION MATRIX FOR

HSB FEMALES

	SES	Ability	Track	Courses	Grades	Infoth	ASP	EDATT
SES	1.000							
Ability	.284	1.000						
Track	.218	.373	1.000					
Courses	.184	.366	.416	1.000				
Grades	.099	.411	.223	.213	1.000			
Infoth	-.039	-.043	.078	.096	.081	1.000		
ASP	.284	.465	.380	.373	.317	.155	1.000	
EDATT	.144	.317	.294	.233	.321	.076	.449	1.000

APPENDIX B

NON-ZERO PATHS FOR

NLS MALES

	Dependent Variables						
	OCCATT	EDATT	ASP	Infoth	Grades	Courses	Track
SES	-	-	.225	-.184	-	.178	.020
Ability	.101	.353	.273	-.167	.491	.371	.421
Track	-	.166	-	-	-	.263	-
Courses	-	-	-	-	.077	-	-
Grades	-	-	.192	-	-	-	-
Infoth	-	.140	-	-	-	-	-
ASP	-	.196	-	-	-	-	-
EDATT	.303	-	-	-	-	-	-
R^2	.172	.308	.213	.049	.241	.329	.177

DECOMPOSITION OF EFFECTS ON

EDATT FOR NLS

MALES

	Direct	Indirect	Effect Explained by Model	Spurious	Total Effect
SES	-	.023	.023	.076	.099
Ability	.353	.120	.473	.023	.496
Track	.166	.001	.167	.196	.363
Courses	-	.003	.003	.338	.341
Grades	-	.038	.038	.335	.373
Infoth	.140	-	.140	-.029	.111
ASP	.196	-	.196	.174	.370

NON-ZERO PATHS FOR

NLS FEMALES

	Dependent Variables						
	OCCATT	EDATT	ASP	Infoth	Grades	Courses	Track
SES	-	-	-	-.062	-	.133	.104
Ability	.108	.275	-	-.218	.389	.295	.347
Track	-	.195	.130	-	.107	.323	-
Courses	-	-	.259	-	-	-	-
Grades	-	.105	.213	-	-	-	-
Infoth	-	.065	-	-	-	-	-
ASP	.065	.331	-	-	-	-	-
EDATT	.242	-	-	-	-	-	-
R^2	.136	.343	.139	.037	.191	.287	.133

DECOMPOSITION OF EFFECTS ON

EDATT FOR NLS

FEMALES

	Direct	Indirect	Effect Explained by Model	Spurious	Total Effect
SES	-	.036	.036	.058	.094
Ability	.275	.179	.454	-.026	.428
Track	.195	.089	.284	.096	.380
Courses	-	.086	.086	.282	.368
Grades	.105	.070	.175	.164	.339
Infoth	.065	-	.065	-.061	.004
ASP	.331	-	.331	.123	.454

NON-ZERO PATHS FOR

HSB MALES

	Dependent Variables					
	EDATT	ASP	Infoth	Grades	Courses	Track
SES	-	-	-	-	.101	.076
Ability	-	.242	-.166	.365	.337	.476
Track	.123	.195	-	-	.229	-
Courses	.166	.216	-	.121	-	-
Grades	-	.157	.136	-	-	-
Infoth	-	.097	-	-	-	-
ASP	.448	-	-	-	-	-
R^2	.294	.348	.040	.133	.239	.227

DECOMPOSITION OF EFFECTS ON

EDATT FOR HSB

MALES

	Direct	Indirect	Effect Explained by Model	Spurious	Total Effect
SES	-	.049	.049	.120	.169
Ability	-	.350	.350	-.024	.326
Track	.123	.149	.272	.076	.348
Courses	.166	.106	.272	.091	.363
Grades	-	.076	.076	.178	.254
Infoth	-	.043	.043	.095	.138
ASP	.448	-	.448	.073	.521

NON-ZERO PATHS FOR

HSB FEMALES

	Dependent Variables					
	EDATT	ASP	Infoth	Grades	Courses	Track
SES	-	.141	-	-	-	.122
Ability	-	.275	-.138	.411	.245	.338
Track	.122	.150	-	.081	.324	-
Courses	-	.146	-	-	-	-
Grades	.185	-	.103	-	-	-
Infoth	-	.137	-	-	-	-
ASP	.344	-	-	-	-	-
R^2	.250	.337	.032	.169	.225	.153

DECOMPOSITION OF EFFECTS ON

EDATT FOR HSB

FEMALES

	Direct	Indirect	Effect Explained by Model	Spurious	Total Effect
SES	-	.073	.073	.071	.144
Ability	-	.248	.248	.069	.317
Track	.122	.083	.205	.089	.294
Courses	-	.050	.050	.183	.233
Grades	.185	.005	.190	.131	.321
Infoth	-	.047	.047	.029	.076
ASP	.344	-	.344	.105	.449

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